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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107-4431

May 31, 1996

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Richard J. Weinzierl, Manager  
Facilities and Environmental Engineering  
Cooper Industries  
150 Lincoln Avenue  
Grove City, PA 16127-1898

RE: OU2 Risk Assessment Comments

Dear Mr. Weinzierl:

EPA previously sent the comments from the site toxicologist to expedite the revision of the Risk Assessment. These are EPA's final comments on the Risk Assessment. Please note that the bulk of the comments are from the toxicologist and that these comments are the same as those sent previously. EPA is one week late with these final comments and therefore, EPA extends the due date for the revised Risk Assessment Report to June 14, 1996.

Toxicologist

1. Table 2-1: For HW-6, the second two columns should be "USGS" instead of "CEC." The two results shown in these columns for 2-butanone should be carbon disulfide.
2. With respect to the blank contaminant validation for the CEC data: The approach is not very clear. All the positive blank results (laboratory and field), identified by the case they affect, should be shown. Then "B" qualifiers could be applied to the CEC data. For example, I found an acetone result of 5 ug/l in September 1993 and a methylene chloride result of 11 ug/l in May 1995, but did not find the 2-butanone result mentioned on pages 22 and 29.
3. Table 2-7/Appendix C-3: The Lazor results are missing from Appendix C-3.
4. Table 2-3: The "cancer risk" RBCs should be deleted for 1,1-dichloroethane and styrene. The "hazard quotient" RBCs should be corrected for 2-butanone (190 ug/l), 4-methyl-2-

12. The risk assessment should include the following information:
  - definition of an RfD
  - definition of and equation for Hazard Quotient
  - definition of and equation for Hazard Index
  - description of oral-to-dermal adjustments (and the fact that, for VOCs, absorption is virtually 100% so that the oral and dermal parameters are assumed to be the same)
  - definition of a CSF
  - equation for cancer risk estimation
13. The references for the toxicity profiles in Section 4 should be included.
14. Page 46: The vinyl chloride profile should not refer to benzene.
15. Page 46, last paragraph; What are the harmful breakdown products of vinyl chloride?
16. Appendix D-1, child dermal: The input parameters should be 7200 (A), 350 (EF), 6 (ED), 15 (BW), 2190 (AT-NC), 0.33 (t), and 0.016 (C). Therefore, the cancer risk should be  $6.4E-6$ .
17. Appendix D-2: It is not necessary to include 2-butanone. The "B" for vinyl chloride on the dermal spreadsheets should be  $2.3E-3$ .
18. Appendix D-3: The  $t^*$  value for benzene on the dermal spreadsheets should be  $6.3E-1$ .
19. The risk assessment should include the source of the risk assessment equations and input values. This could be accomplished most simply by a table or a list, either in Appendix D or Section 3. (For example: "Source of ingestion equation: EPA, 1989 (RAGS). Inputs are defaults for residential adult and child exposure according to EPA, 3/25/91. Source of dermal equation: EPA, 1992. Inputs are defaults for residential adult and child exposure according to EPA, 3/25/91, supplemented by EPA, 1989 (Exposure Factors Handbook) for skin surface area and professional judgment for shower/bath duration," etc.)
20. Table 5-1 and page 50: The dermal child cancer risk should be  $6.4E-6$ ; the total cancer risk should be  $5.5E-4$ .
21. Table 5-2 and page 53: The adult and child noncancer risks should not be added together. The adult HI is 0.13 and the child HI is 0.24.

significantly affected. Overall, the report was well-written and needs minor corrections and the addition of small but crucial sections on risk characterization and uncertainty (indicated by comments 11, 12, 13, 19, 24).

#### PADEP

##### Section 3.2; Identification of Exposure Pathways:

The second paragraph identifies the current and future residential exposure scenarios considered for evaluation in this report. Although the consultant does a good job assessing the duration and magnitude of each exposure scenario identified, the consultant did not evaluate the effects of VOC inhalation for children bathing. Since this exposure scenario has been identified as an exposure pathway for adults showering, then it should also be evaluated for children bathing. Please add this scenario to the assessment narrative and include inhalation intake calculations.

##### Appendix D; Intake Calculations:

###### Eickman Well, Future Adult Resident, Risk by Chemical:

The Vinyl Chloride Cancer Risk and Total Cancer Risk calculation should be  $3.8 \text{ E-4}$ , not  $3.7 \text{ E-4}$ . Please correct.

###### Eickman Well, Future Child Resident, Risks by Chemical:

The Vinyl Chloride Cancer Risk and Total Cancer Risk calculation should be  $3.4 \text{ E-4}$ , not  $1.7 \text{ E-4}$ . Please correct.

###### B.C. & H Aquifers Future Adult Resident, Risk by Chemical:

The 2-Butanone Hazard Index and Total Hazard Index calculation should be  $3.3 \text{ E-4}$ , not  $3.4 \text{ E-4}$ . Please correct. [RPM Comment: Since the EPA risk assessor has agreed to remove 2-Butanone, no change is needed]

##### Appendix F; Cenral Tendency Intake Calculations:

###### Eickman Well, CT-Future Child Resident, Risks By Chemical:

The Vinyl Chloride Cancer Risk and Total Cancer Risk calculation should be  $1.8 \text{ E-5}$ , not  $1.7 \text{ E-5}$ . Please correct.

###### Clarion/Mine Void, CT-Future Child Resident, Drinking Water:

The Total Cancer Risk calculation should be  $4.6 \text{ E-6}$ , not  $4.7 \text{ E-6}$ . Please correct.

###### Clarion/Mine Void, CT-Future Child Resident, Risks by Chemical:

The Vinyl Chloride Cancer Risk calculation should be  $4.6 \text{ E-6}$ , not  $4.7 \text{ E-6}$ . Likewise, the Total Cancer Risk calculation should be  $4.7 \text{ E-6}$ , not  $4.8 \text{ E-6}$ . Please correct.

RPM Comments: No comments.

Hydrogeologist: No comments.

If you have any questions, please contact me at (215) 597-0676.

Sincerely,



Frank Vavra  
Remedial Project Manager

cc. Robert Kimball  
Mindi Snoparsky  
Jennifer Hubbard  
Gregg Crystall